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Assessing Security Cooperation Programs

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Agenda

- Problem Definition
- Objectives
- Approach
- Notional Example
- Future Work

Problem Definition

- Global Combatant Commands (GCCs) conduct security cooperation activities with partner nations across their sphere of influence in support of nation security objectives

- Defense Security Cooperation Agency (DSCA) is charged with the development, implementation, assessment and coordination of security cooperation plans and programs for DoD

- Assessment is challenged by incompatible methods and metrics across GCCs, incomparable evaluations, false interactions, lack of meaningful or objectives-based analysis

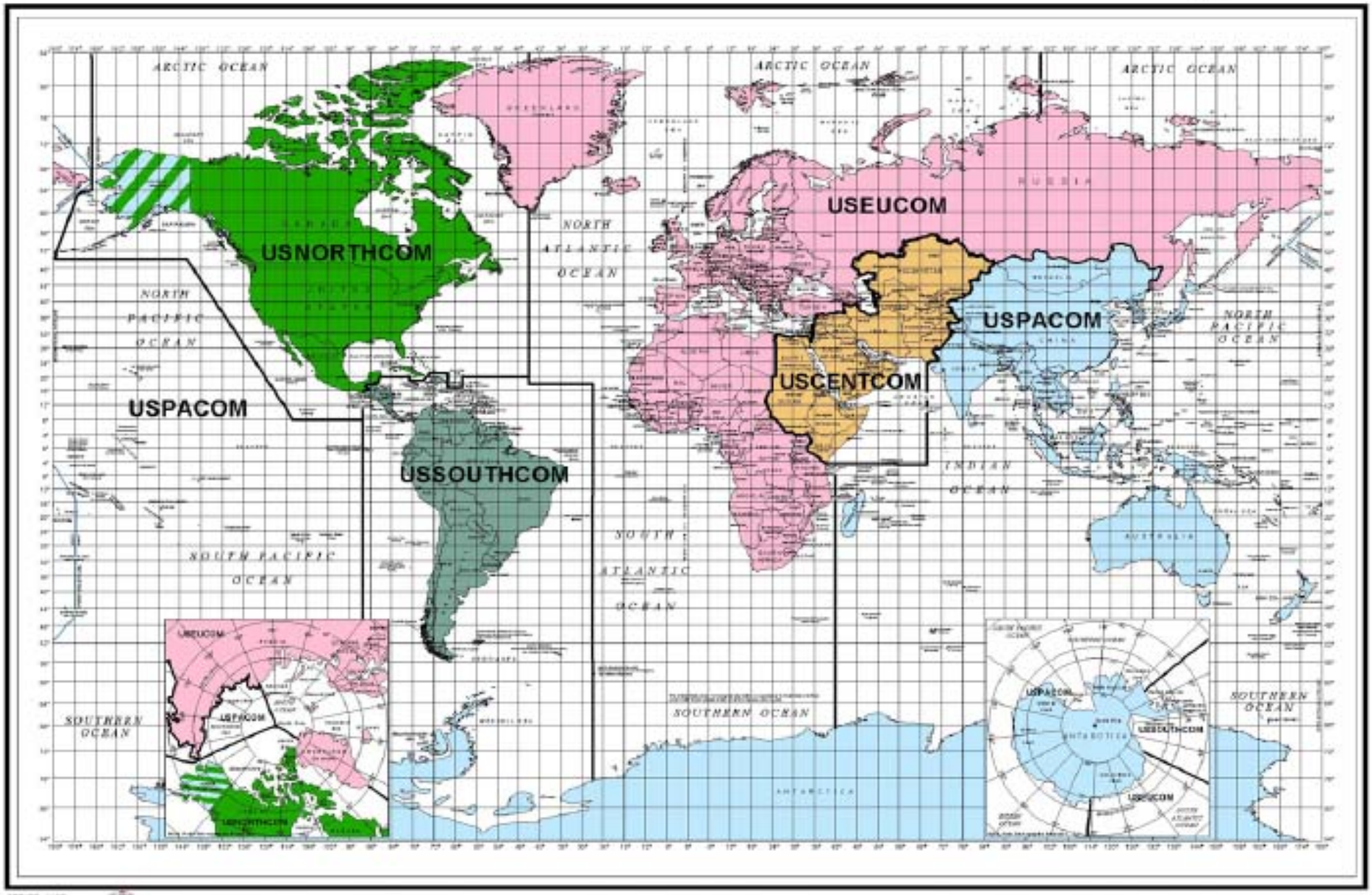
Objective

- Develop a common, repeatable, logical and simple quantitative assessment process of the return on investment of security cooperation efforts across Global Combatant Commands (GCCs)
- Assess how well diverse security cooperation activities are supporting program objectives
- Provide decision makers with information on the effectiveness of security cooperation efforts

THE WORLD 1:135,000,000

THE WORLD WITH COMMANDERS' AREAS OF RESPONSIBILITY

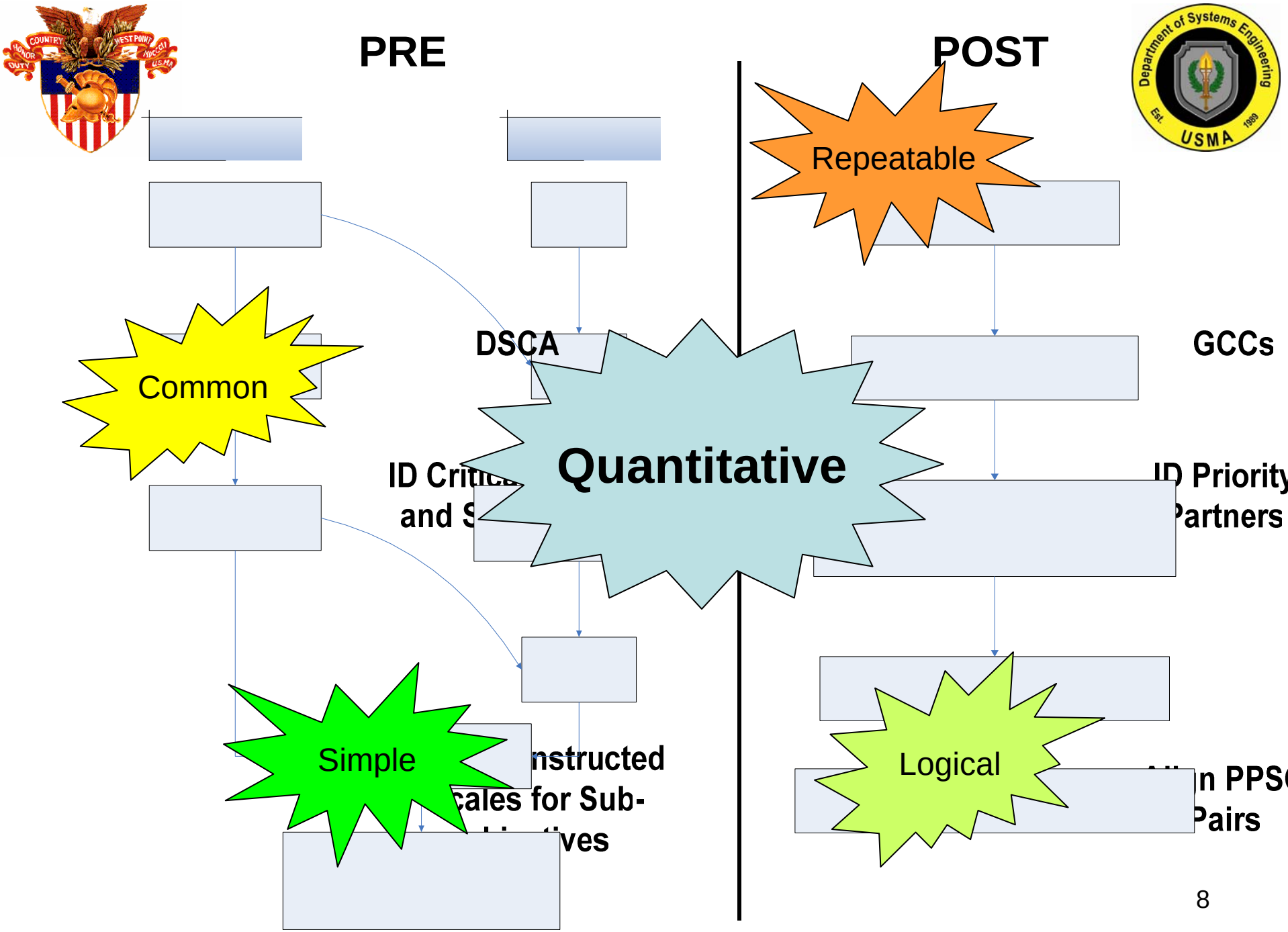
EDITION 5-NIMA SERIES 1107



http://www.defenselink.mil/specials/unifiedcommand/ *Security Cooperation Assessment*

Approach

- Develop a methodology that:
  - Measures **progress** resulting from security cooperation activities vs. goals (or initial assessments)
  - Uses weights that reflect **priorities** and **expectations** of GCCs with respect to partners and objectives
  - Focuses internally, at the GCC level, on progress by country and objective
- Recognize that:
  - Priorities, partners and objectives may change year to year
  - Some outcomes are not directly linked to or caused by security cooperation programs


PRE
POST
Repeatable
Common
DSCA
GCCs
Quantitative
ID Priority
Partners
Simple
Logical
PPSO
Pairs

Notional Example

Pre-FY Tasks: DSCA

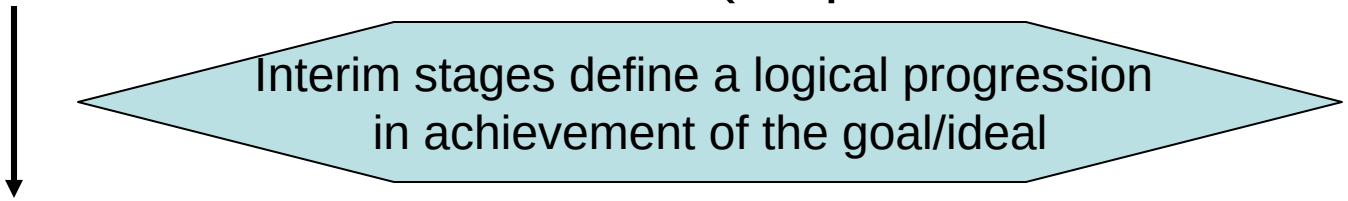
- ID Critical Objectives and Sub-objectives for all GCCs
  - A5, A6, D1, D2, D3 (2 sub-objectives each)
  - Example Objective:
    - Reform the defense establishment of select countries
  - Example Sub-objective:
    - Establish a professional NCO corps

Notional Example

Constructed Scales

- Build **Constructed Scales** for each sub-objective
  - Based on SME and GCC input
  - General enough to apply to all partners across GCCs

- Simple, Logical Scales
  - A = worst case scenario (no professional NCO corps)



  - E = ideal (well developed, seasoned NCO corps in place)

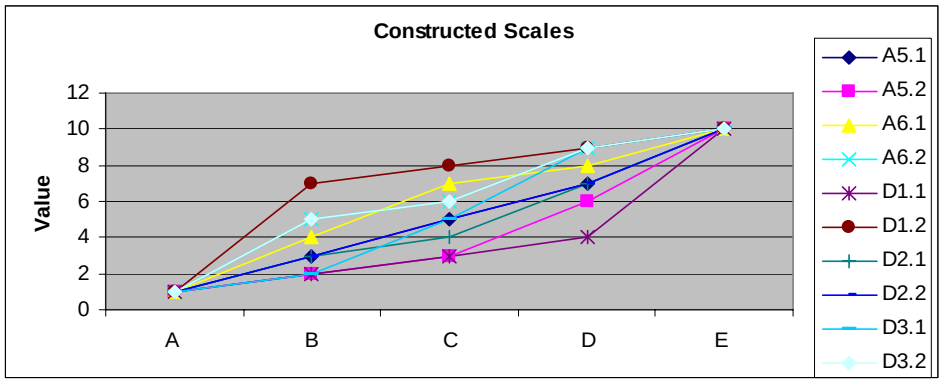
Notional Example

Value Functions

- Create **Value Functions** for each sub-objective
  - Based on SME and GCC input

CONSOLIDATED VALUE FUNCTIONS FOR ALL SUB-OBJECTIVES (NOTIONAL)

	Sub-Objective									
Score	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2
A	1	1	1	1	1	1	1	1	1	1
B	3	2	4	5	2	7	3	3	2	5
C	5	3	7	6	3	8	4	5	5	6
D	7	6	8	9	4	9	7	7	9	9
E	10	10	10	10	10	10	10	10	10	10



Notes:
Must increase - cannot stay the same
Must start with 1 and end with 10
A = worst case
E = ideal

Notional Example

Pre-FY Tasks: GCCs

- Identify Priority Partners (PPs)
- Align Priority Partners and Sub-objectives
  - PPSO pairs

GCC X

10 Priority Partners

	Objectives									
	A5		A6		D1		D2		D3	
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2
1	X	X	X	X			X	X	X	
2	X	X	X		X	X		X		
3	X	X	X		X	X	X	X		
4					X	X		X	X	X
5					X	X				
6	X		X	X			X			X
7					X	X				
8	X		X	X	X	X			X	X
9	X		X				X		X	X
10				X			X	X	X	X

Notional Example

Weightings by GCCs

- Use Swing Weight Matrix to Determine Objective and Sub-objective Weights

OBJECTIVE A5 (Notional)

Linked to National Security Objectives

IMPORTANCE (Reflects Priorities in Country and Sub-Objective)

POTENTIAL for Improvement Over Time (Reflects Goals)

	Critical		Significant		Considerable	
Great	3-A5.1		1-A5.2		9-A5.1	
	3-A5.2					
		100		75		35
Some	1-A5.1		6-A5.1		2-A5.1	
			8-A5.1			
		90		50		20
Minimal					2-A5.2	
		80		40		1

Notional Example

Weighting

- Use Swing Weight Matrix to Determine Objective and Sub-objective Weights
  - Reflect priorities and potential

OBJECTIVE A5

	PPSO Roll Up						
Partner	A5.1	Value	Weight	A5.2	Value	Weight	Tot Value
1	X	90	0.173	X	75	0.144	521
2	X	20	0.038	X	1	0.002	
3	X	100	0.192	X	100	0.192	
4			0.000			0.000	
5			0.000			0.000	
6	X	50	0.096			0.000	
7			0.000			0.000	
8	X	50	0.096			0.000	
9	X	35	0.067			0.000	
10			0.000			0.000	
		345			176		

POTENTIAL for Improvement Over Time (Reflects Goals)

IMPORTANCE (Reflects Priorities in Country and Sub-Objective)

	Critical		Significant		Considerable	
Great	3-A5.1		1-A5.2		9-A5.1	
	3-A5.2					
		100		75		35
Some	1-A5.1		6-A5.1		2-A5.1	
			8-A5.1			
		90		50		20
Minimal					2-A5.2	
		80		40		1

Notional Example
Pre Tasks: GCCs

- Roll up Objective and Sub-objective Weights Across Priority Partners

	Objectives											
	A5		A6		D1		D2		D3			
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2	PP Total	% Total
1	0.173	0.144	0.120	0.152			0.159	0.097	0.047		0.892	17.8%
2	0.038	0.002	0.024		0.066	0.066		0.177			0.373	7.5%
3	0.192	0.192	0.088		0.112	0.112	0.159	0.106			0.960	19.2%
4					0.039	0.039		0.027	0.002	0.113	0.220	4.4%
5					0.132	0.132					0.263	5.3%
6	0.096		0.160	0.104			0.088			0.113	0.561	11.2%
7					0.059	0.059					0.118	2.4%
8	0.096		0.002	0.160	0.092	0.092			0.094	0.094	0.630	12.6%
9	0.067		0.040				0.002		0.151	0.169	0.429	8.6%
10				0.152			0.168	0.018	0.169	0.047	0.554	11.1%
	1.000		1.000		1.000		1.000		1.000		5.000	

Indicator of Partner Emphasis

Notional Example

Goals / Assessments by GCCs

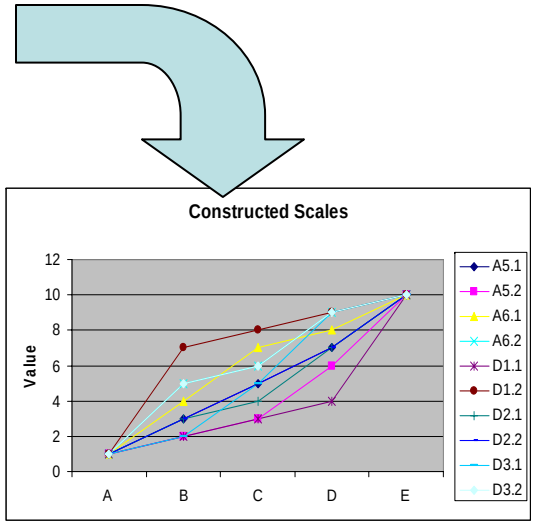
- Assess each PPSO pair using Constructed Scales and convert to Value Scores using Value Functions

Pre-FY Assessment - Scale Score

	A5		A6		D1		D2		D3	
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2
1	B	C	A	A			B	B	E	
2	B	D	B		C	B		C		
3	C	B	B		C	C	C	C		
4					D	C		D	A	A
5					A	C				
6	A		D	B			A			C
7					A	A				
8	D		C	D	B	A			C	C
9	D		C				C		A	B
10				C			C	E	A	A

Pre-FY Assessment - Value Mapping

	A5		A6		D1		D2		D3	
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2
1	3	3	1	1			3	3	10	
2	3	6	4		3	7		5		
3	5	2	4		3	8	4	5		
4					4	8		7	1	1
5					1	8				
6	1		8	5			1			6
7					1	1				
8	7		7	9	2	1			5	6
9	7		7				4		1	5
10				6			4	10	1	1



Notional Example

Initial Weighted Value Scores

- Apply weights to Value Scores and roll up weighted values by Sub-objective, Objective, and Priority Partner

PRE-FY WEIGHTED VALUE

	A5		A6		D1		D2		D3				
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2	Total - PP	Max	% Max
1	0.518	0.432	0.120	0.152			0.477	0.292	0.471		2.461	8.915	28%
2	0.115	0.012	0.096		0.197	0.461		0.883			1.764	3.725	47%
3	0.960	0.384	0.351		0.336	0.895	0.636	0.530			4.091	9.604	43%
4					0.158	0.316		0.186	0.002	0.113	0.774	2.203	35%
5					0.132	1.053					1.184	2.632	45%
6	0.096		1.278	0.519			0.088			0.678	2.659	5.609	47%
7					0.059	0.059					0.118	1.184	10%
8	0.672		0.011	1.438	0.184	0.092			0.471	0.565	3.433	6.298	55%
9	0.470		0.280				0.007		0.151	0.847	1.755	4.290	41%
10				0.911			0.671	0.177	0.169	0.047	1.975	5.538	36%
Total - SO	2.831	0.827	2.136	3.019	1.066	2.875	1.880	2.067	1.264	2.250			
Total - Obj	3.658		5.155		3.941		3.947		3.514				
% Max	37%		52%		39%		39%		35%				

Goals

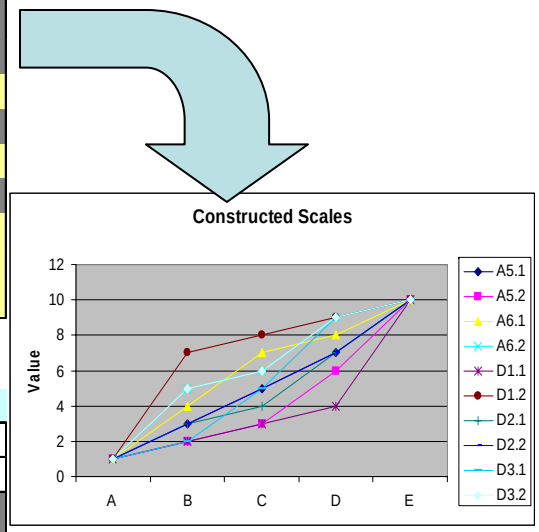
Notional Example

Post-FY Tasks: GCCs

– Assess each PPSO pair using Constructed Scales and convert to Value Scores using Value Functions

Post-FY Assessment - Scale Score

	A5		A6		D1		D2		D3	
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2
1	C	B	A	A			B	B	E	
2	B	E	C		C	B		C		
3	D	C	B		D	C	C	C		
4					D	D		D	B	A
5					B	C				
6	B		E	C			B			C
7					C	B				
8	D		D	D	B	A			B	B
9	D		C				D		B	B
10				C			C	D	A	B



Post-FY Assessment - Value Mapping

	A5		A6		D1		D2		D3	
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2
1	5	2	1	1			3	3	10	
2	3	10	7		3	7		5		
3	7	3	4		4	8	4	5		
4					4	9		7	2	1
5					2	8				
6	3		10	6			3			6
7					3	7				
8	7		8	9	2	1			2	5
9	7		7				7		2	5
10				6			4	7	1	5

Notional Example
Analysis of Results

- Roll up weighted values by Sub-objective, Objective, and Priority Partner
- **Compare** Pre-FY and Post-FY Total Weighted Values for Objectives and Priority Partners
  - Identify areas of significant **improvement or decline** to address in detail

DRIVE DISCUSSION

POST-FY WEIGHTED VALUE

	A5		A6		D1		D2		D3					
Partner	A5.1	A5.2	A6.1	A6.2	D1.1	D1.2	D2.1	D2.2	D3.1	D3.2	Total - PP	Max	% Max	**Change**
1	0.864	0.288	0.120	0.152			0.477	0.292	0.471		2.663	8.915	30%	8.2%
2	0.115	0.019	0.168		0.197	0.461		0.883			1.843	3.725	49%	4.5%
3	1.344	0.576	0.351		0.447	0.895	0.636	0.530			4.779	9.604	50%	16.8%
4					0.158	0.355		0.186	0.004	0.113	0.815	2.203	37%	5.3%
5					0.263	1.053					1.316	2.632	50%	11.1%
6	0.288		1.597	0.623			0.265			0.678	3.451	5.609	62%	23.8%
7					0.178	0.414					0.592	1.184	50%	400.0%
8	0.672		0.013	1.438	0.184	0.092			0.188	0.471	3.058	6.298	49%	-10.9%
9	0.470		0.280				0.012		0.301	0.847	1.911	4.290	45%	8.9%
10				0.911			0.671	0.124	0.169	0.235	2.110	5.538	38%	6.9%
Total - SO	3.752	0.883	2.529	3.123	1.428	3.270	2.062	2.014	1.134	2.345				
Total - Obj	4.635		5.652		4.697		4.076		3.478					
% Max	46%		57%		47%		41%		35%					
Change	26.7%		9.6%		19.2%		3.3%		-1.0%					

Future Work

- Assessing Value vs. Resources
  - Compare value changes to resource allocation
- Developing Compelling Presentation of Information / Visualizations
- Developing an Adaptable, User Friendly, Excel-based System to Facilitate the Process